

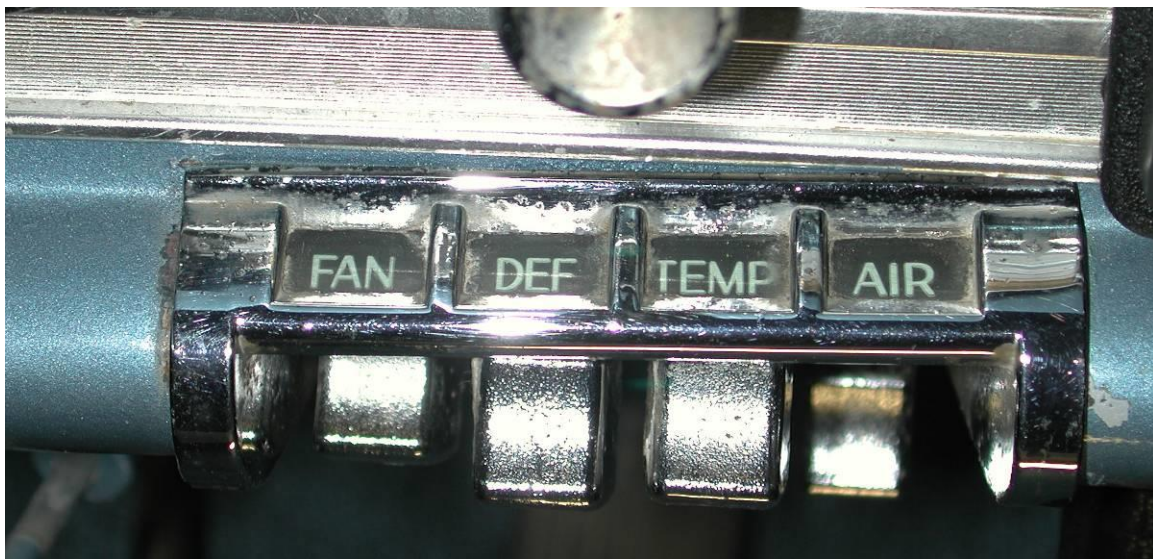


specializing in “AIR CONDITIONING, PARTS AND SYSTEMS” for your classic

“PERFECT FIT”
IN-DASH
HEAT/ COOL/ DEFROST
1963 CHEVROLET IMPALA

CONTROL & OPERATING INSTRUCTIONS

The controls on your new “Perfect Fit” system. Offers complete comfort capabilities in virtually every driving condition. This includes Temperature control in all of the modes. This system also provides DEHUMIDIFICATION in the defrost mode and the ability to blend the air between Face and Heat / Defrost modes.



FAN	FACE/ HEAT DOOR	TEMPURATURE	FACE / DEFROST DOOR
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THE PICTURE YOU SEE ON THE FIRST PAGE SHOWS THE CONTROLS IN THE FACE MODE. THIS MEANS THAT THE AIR WILL BE DISTRIBUTED THROUGH THE FACE OUTLETS. THIS ALSO HAS THE TEMPERATURE LEVER IN THE COLDEST POSITION. WITH THE CONTROLS IN THIS POSITION YOU WILL GET THE AIR THROUGH THE FACE OUTLETS WITH THE COMPRESSOR ON.

CAUTION: ALL OF THE OUTSIDE VENTS MUST BE CLOSED WHEN THE SYSTEM IS IN THE A/C MODE. THIS WILL ALLOW THE A/C SYSTEM TO FUNCTION AT ITS MAXIMUM PERFORMANCE LEVEL.

THE FOLLOWING SUMMARY WILL DESCRIBE EACH OF THE CONTROL LEVERS FUNCTION.

FAN SPEED SWITCH: There are 3 speeds plus Off. When the switch is in the off position it will disconnect the 12V power to the Blower Motor and the A/C Clutch. This will shut down the entire system. When the switch is moved to any of the blower speeds 1, 2 or 3 there is 12V supplied to the Micro-Switch that is mounted on the Face Duct.

FACE / DEFROST DOOR CONTROL: When the Control Knob is pushed DOWN the air is distributed to the FACE outlets. When the knob is pulled UP the air will go to the defrost outlets. The knob can be moved any position from the TOP position to the BOTTOM. This will give blend between the defrost and the face outlets.

FACE / HEAT DOOR CONTROL: When the Control Knob is pushed all the way DOWN the air is distributed to the floor outlets. NOTE: the Face / Defrost door must be in the Down position. When the Knob is pulled UP the air is distributed to the Face outlets. In the UP position the Compressor clutch is engaged and you have A/C.

TEMPERATURE CONTROL: The Temperature Knob as shown is in the COLDEST temperature position. As the lever is pushed down the temperature of the discharged air will RISE to the HOTTEST point.

Note: The temperature lever will function in any of the modes.



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INSTALLATION INSTRUCTIONS 1963 CHEVROLET IMPALA

Congratulations!! You have just purchased the highest quality, best performing A/C system ever designed for you Classic Car. To obtain the high level of performance and dependability our systems are known for, pay close attention to the following instructions. Before beginning the installation check the box for the correct components.

Evaporator
Face Duct Assembly
Inlet Air Block off Assembly
Firewall Block off Assembly
Flex hose 2” dia. x 4ft. - 2ea.
Flex hose 2 1/2” dia. x 1ft. - 1ea.
Sack Kit Hardware
Sack Kit Control
Glove box

IMPORTANT INFORMATION

1. Before starting, read the instructions carefully and follow proper sequence.
2. Check condition of engine mounts. Excessive engine movement can damage Hoses to A/C, heater, radiator, transcooler, and power steering systems.
3. Before starting, check vehicle interior electrical functions. I.e. interior lights, radio, horn, etc. When ready to start installation, disconnect battery.
4. Fittings. Use one or two drops of lubricant on O’rings, threads and rear of bump for O’ring where female nut rides. Do not use thread tape or sealants.
5. Always use two wrenches to tighten fittings. Try holding in one hand while squeezing together while other hand holds fitting in position.
6. Shaft seals in a small percentage of compressors will require as much as 3-4 hours run time to become leak free.
7. Compressors supplied in our complete systems are filled with proper amount of oil.
8. Compressor requires technician to hand turn 15-20 revolutions before and after charging with liquid from a charging station before running system. Compressors with damaged reed valves cannot be warranted.
9. Should you have any technical questions, or are suspect of missing, or defective parts, call us immediately. Our knowledgeable staff will be glad to assist you.

YOU CAN NOW BEGIN THE INSTALLATION

Remove Glove box door and the glove box. Discard glove box.

Retain original hardware.



DRAIN RADIATOR AND DISCONNECT BATTERY GROUND CABLE.



Removal of the Original Heater Assembly can be accomplished by disconnecting heater hoses from the firewall.

Around perimeter of the housing remove (5) nuts that hold the blower box to the firewall.

Located behind original control head the resistor connector on the heater box.

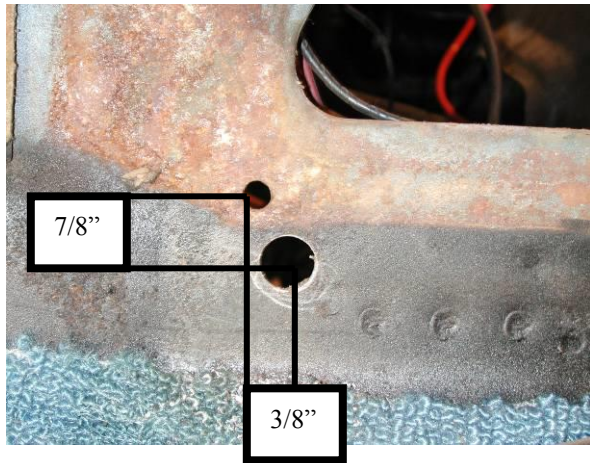
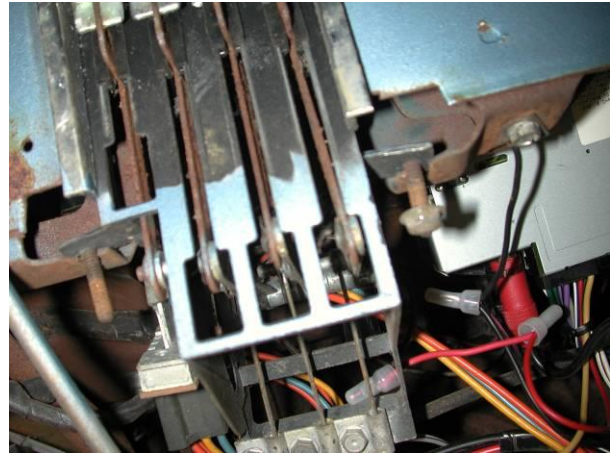
Disconnect the electrical connector.
Remove heater assembly.



Remove (2) nuts located under the control head.

Remove the control head and disconnect the electrical connector. Also disconnect (3) original control cables, retain the original hardware.

Set the control head aside for modification and reinstall.



Locate behind dash and on firewall the hole that previously mounted the heater box. Drill (1) $\frac{3}{4}$ " dia. hole for the drain tube as shown.

Remove hood, passenger side hood hinge and blower motor assembly. Retain the original hardware.

Locate inlet block off plate from unit box.

Attach over inlet hole on the firewall using original screws.

Reinstall hood latch and hood using original hardware.



All modifications to the vehicle are complete. We will now begin installation of the system.

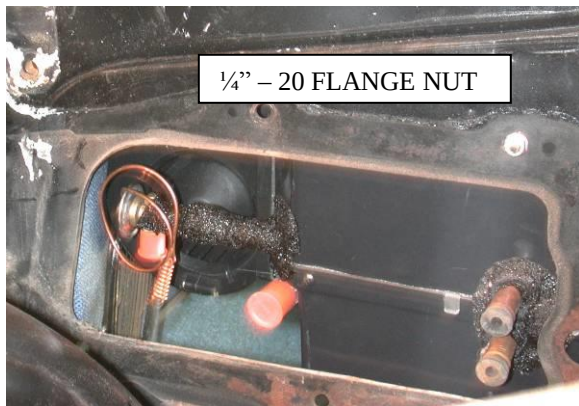
Locate evaporator, Air Distribution Duct assembly and (4) #10 x 5/8" pan head screws.

Place evaporator on the bench and attach Distribution assembly onto the evaporator using (4) #10 x 5/8" pan head screws.

(2) ON TOP AND (2) ON BOTTOM



Lift unit up and behind the glove box opening.



1/4" - 20 FLANGE NUT

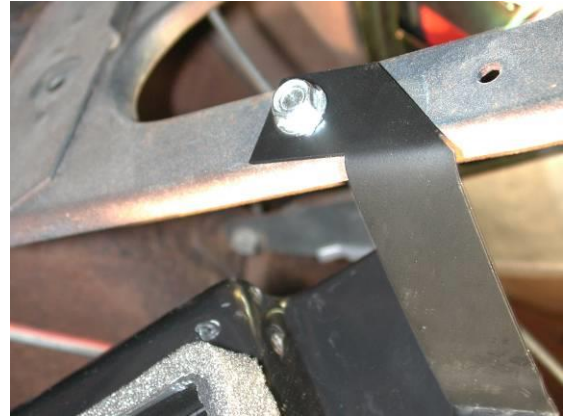
Insert (1) upper rear evaporator mounting stud through the original hole as shown. Attach using (1) 1/4" - 20 flange nut provided.

Locate in the hardware sack kit the evaporator support brace, (1) #14 x 3/4" tek screw.



Remove #10 screw from evaporator assembly and attach support brace to the evaporator using original screw.

Attach top part of the brace to the instrument panel support brace using (1) #14 x $\frac{3}{4}$ " tek screw.



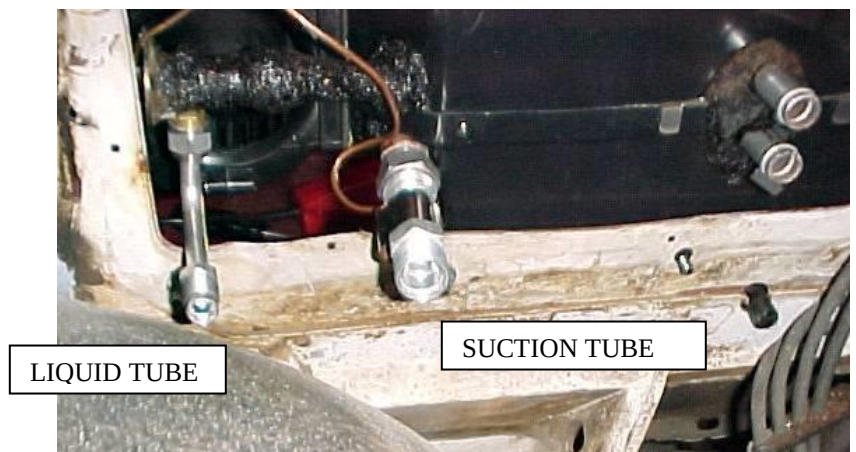
Locate in the hardware sack kit (2) #14 x $\frac{3}{4}$ " tek screws.

Attach blower support brace to the body using (2) #14 tek screws.

CAUTION: BE SURE THAT THE EVAPORATOR IS LEVEL WITH THE BOTTOM OF THE DASH.

Locate in the hardware sack kit the following components.

Suction Tube
Liquid Tube
TXV Bulb Clamp
Refrigerant Tape
(1)#6 o-ring
(1) #10 o-ring



Install liquid line onto the Expansion valve (TXV) as shown. Use #6 o-ring and (2) drops of mineral oil on the o-ring and tighten securely.
Install the Suction Tube on the outlet to the unit as shown. Use #10 o-ring and (2) drops of mineral oil on the o-ring and tighten securely.



Locate Sensing Coil attached to the TXV and utilizing Bulb Clamp, attach to the Suction Tube.

CAUTION: SYSTEM WILL NOT FUNCTION PROPERLY IF THE SENSING COIL IS NOT CLAMPED IN THE CORRECT POSITION. SEE PICTURE.

Wrap Suction Tube and Sensing Coil with refrigerant tape provided. Be sure that all of the exposed metal is covered.

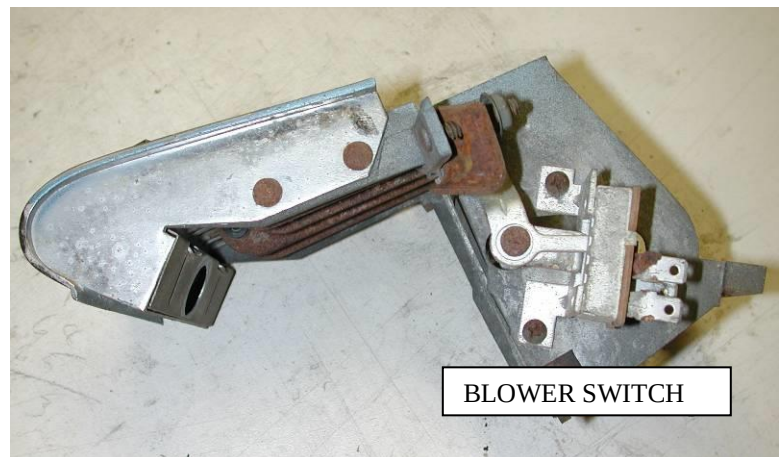


Locate the Firewall Block Off plate, and (6) #10 x 3/4" hex head tek screws.

On engine side of firewall attach over hookup tubes from the evaporator using (6) #10 Tek screws.

Using the refrigerant tape seal around the tubes at the firewall block off plate.

Locate the original control assembly. Remove and discard the original blower switch. Discard all original hardware.



After removal of the blower switch. Slide the original knob and lever assembly down to bottom of the slot and carefully remove.



5/64"
Dia.

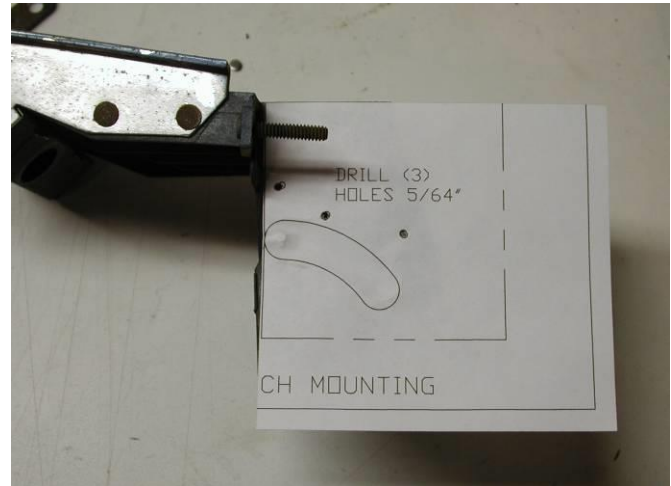
Locate and drill (1) hole 5/64" dia. in end of the control lever bracket between existing hole and the end of the arm.

Locate the Control Switch Drill Template from the installation instructions.

Locate to top edge of the controls and along the left side as shown.

Mark and drill (3) holes 5/64" dia.

Reinstall the original knob and lever assembly.

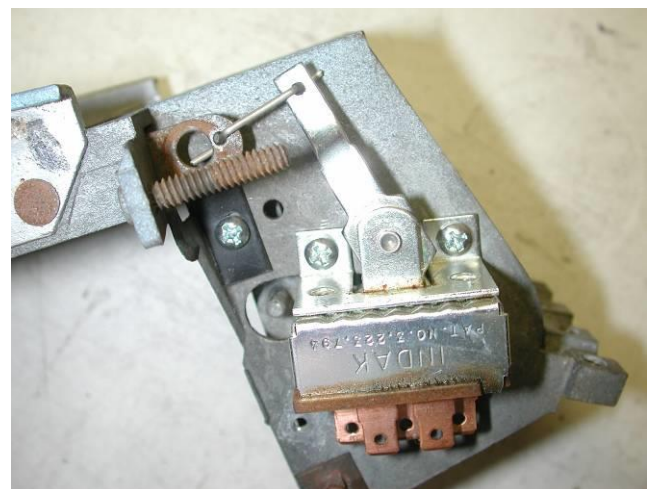


STOP BRACKET
(1) #6 SCREW

Locate in the control sack kit the control lever stop bracket and (1) #6 x 3/8" pan head Philips screw.

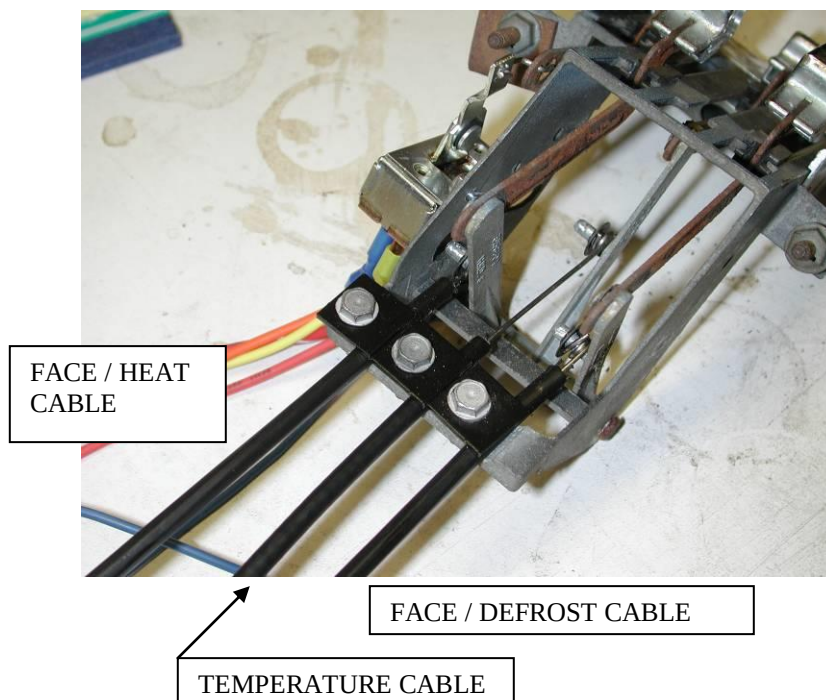
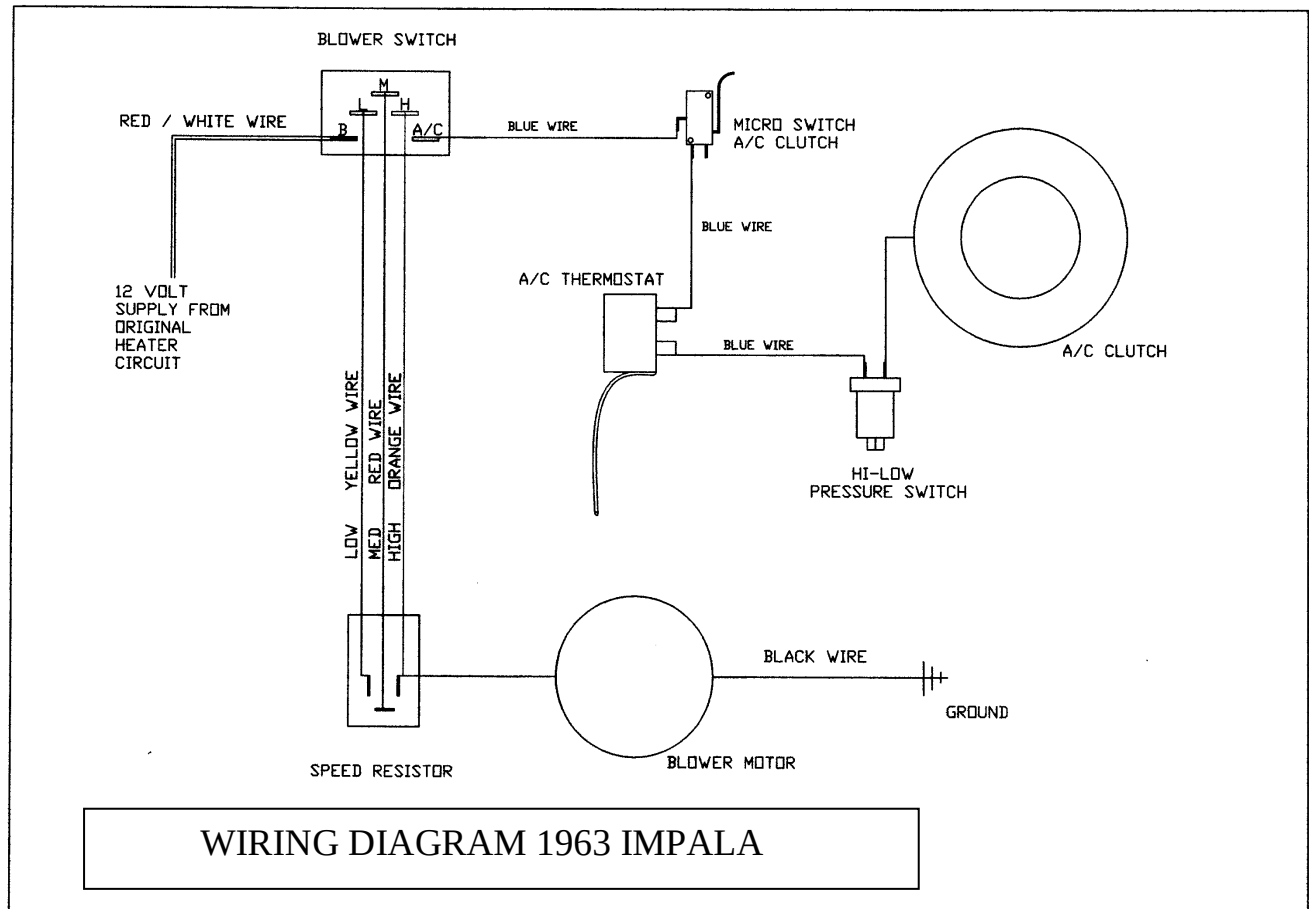
Attach stop bracket to the control assembly using (1) #6 x 3/8" pan head screws.

Locate blower switch, (2) #6 x 3/8" pan head screws, and connecting wire from the control sack kit.



Attach control switch assembly and connecting wire to the original control head using (2) #6 x 3/8" pan head screws.
Locate wire harness from the control sack kit.

Attach harness to the blower switch according to the wiring diagram below.



Locate in the control sack kit (2) SHORT control cables, (1) LONG Temperature control cable, (3) cable clips and (3) 3/16" push nuts.

Attach temperature control cable using original hardware to the center control arm and (1) 3/16" push nut. NOTE: Cable sleeve is 1/4" from the cable clip bracket.

Attach Face / Heat cable to the left side. Using (1) push nut, original screw and cable clip. NOTE: Cable sleeve is 1/2" from cable clip bracket.

Attach Face / Defrost cable to the right side. Using (1) push nut, original screw and cable clip. NOTE: Cable sleeve is 1/2" from cable clip bracket.



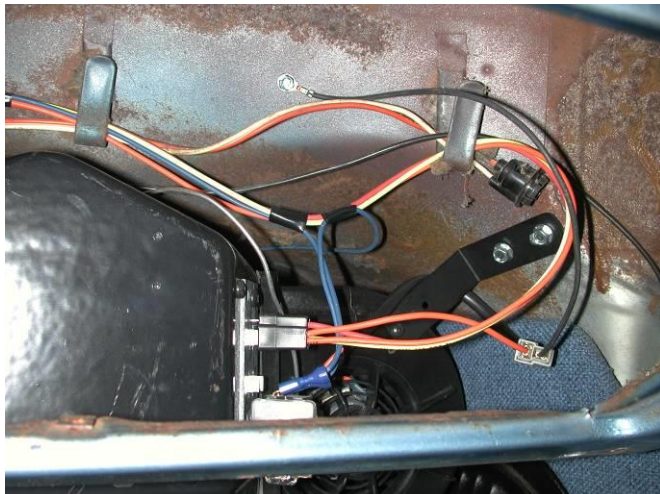
Locate original wire harness that was attached to the blower switch. Cut the connector off. Attach (1) 1/4" male spade connector to the brown wire.

Place control assembly on floor of the car.

Attach red / white striped wire from the blower switch to brown wire from the original harness.

Insert light socket back into the control head.

Reinstall control head using original hardware.



Route main harness across front of unit to the resistor and blower motor. Route blue clutch wire over evaporator and out through hole in the firewall above the unit. Secure ground from the blower motor using (1) #10 x 3/4 "hex head Tek screw.

REFER TO THE WIRING DRAWING FOR PROPER CONNECTIONS.

Hang the wire harness on the clips

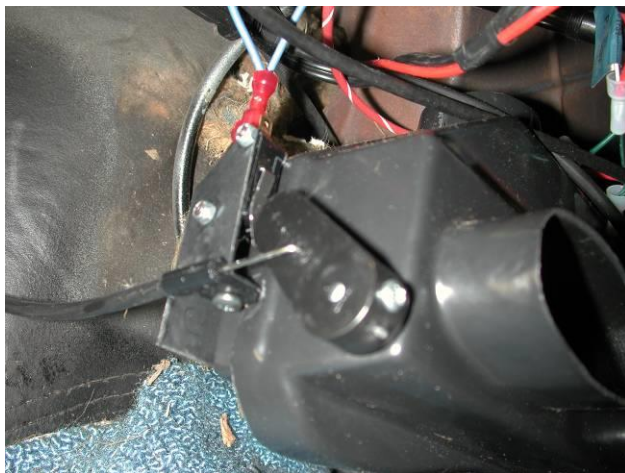
Attach (2) blue wires to the micro-switch located next to the face / heat door crank arm.

Route temperature cable in front of the center ducts and through hole above the unit.
Attach this cable to the water valve.

Locate (2) #8 x 1/2" pan head screws.

Attach Face / Defrost cable to bracket on front of the duct assembly using (1) #8 screw.

Locate center wire of cable in 2nd hole from end of the crank arm.



Attach Face / Heat cable to door on side of the center duct assembly using (1) #8 screw.

Locate center wire of the cable in 2nd hole from the pivot of the crank arm.

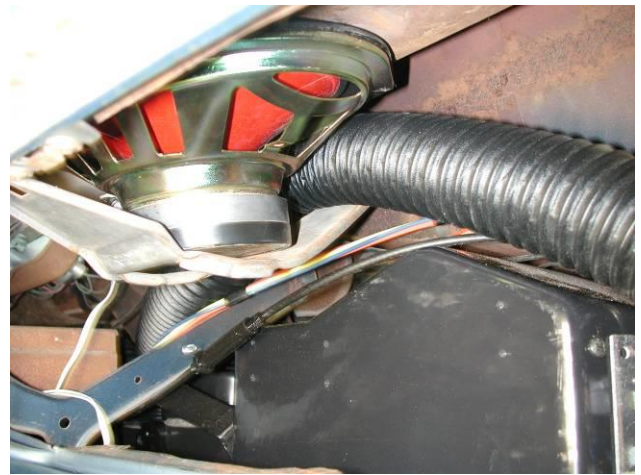
Locate in the hardware sack kit the remote louver assembly, and (2) #10 x 3/4" hex head tek screws.

Locate 2" dia flex hose 48" from the unit box. Cut 40" off the duct hose.

Attach remote louver on the passenger side of instrument panel, using (2) #10 tek screws.



Route 2" dia x 40" flex hose from the right outlet on top of the distribution duct across top of evaporator and attach to the passenger louver.



Locate in the hardware sack kit the remote louver and (2) #10 x $\frac{3}{4}$ " hex head tek screws.

Locate 2" dia flex hose from the unit box. Cut 40" off the duct hose.

Attach remote louver on drivers side of instrument panel, using (2) #10 tek screws.

Route flex hose over to center of the distribution duct and attach it to left outlet on top of the duct.

Locate center face distribution hose adaptor, (2) pieces of 2 $\frac{1}{2}$ " dia flex hose 6" long and (2) #10 x $\frac{3}{4}$ " tek screws.

Attach adapter under center of the instrument panel using (2) #10 tek screws.



Attach 6" flex hose between center hose adapter and the distribution duct hose adapters.



Locate the Center Louver Bezel Assembly and (4) #8 x 3/8" pan head screws.

Attach bezel assembly over the hose adaptor and fasten with (4) #8 screws. (2) on bottom and (1) on each side.

Locate Glove Box and install using the original hardware

If vehicle is equipped with factory speaker cut hole in top of the glove box to fit.



Reinstall glove box door. Attach using original hardware.

Caution: Carefully check under the Instrument Panel for all cables, electrical harness, or flex hoses that might interfere with safe operation of the vehicle.

Installation of the interior components is complete. We will now install the under hood portion of the system.

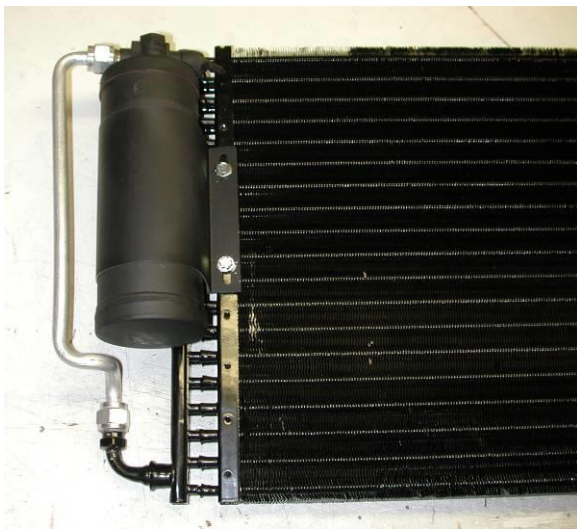
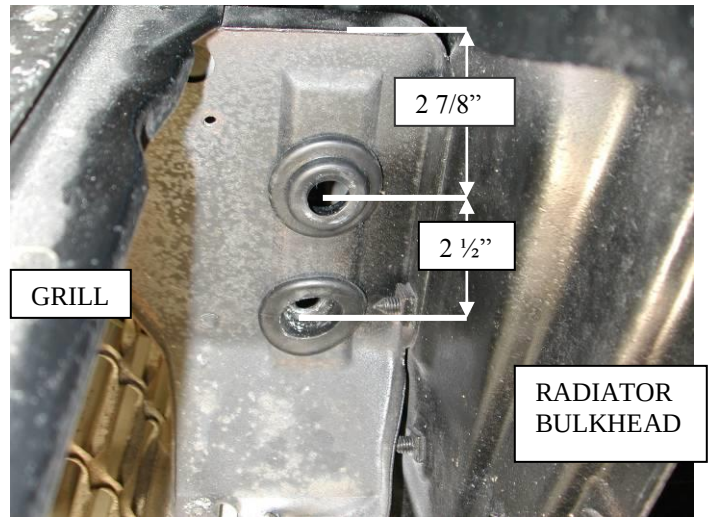
INSTALL THE COMPRESSOR ADAPTER KIT AND COMPRESSOR AT THIS TIME PER THE MANUFACTURERS DIRECTIONS.

Drain and remove the radiator and fan shroud.

Locate and drill (2) holes 1 3/8" diameter. Between grill and radiator support on passenger side of the vehicle.

Location is shown in picture to the right.

Attach (2) grommets as shown.



Locate the Filter / Drier, Drier Mounting Bracket, Aluminum Liquid tube, (2) #6 o-rings, and (2) #10 x 3/8" hex head screws.

Install Filter drier to condenser on third hole from the top as to allow the Liquid Tube to attach as shown.

Install a few drops of mineral oil to the o-ring fittings, and secure.

Locate Condenser, (2) upper condenser mounting brackets, and (4) #10 x 3/8" hex head screws.

Attach brackets to condenser on the top holes as shown.

Locate in the condenser kit the lower left condenser bracket, (2) #10 x 3/8" hex head screws. Attach bracket to the condenser on second hole from the bottom. Carefully place Condenser Assembly through the Radiator Mounting Bulkhead as shown.

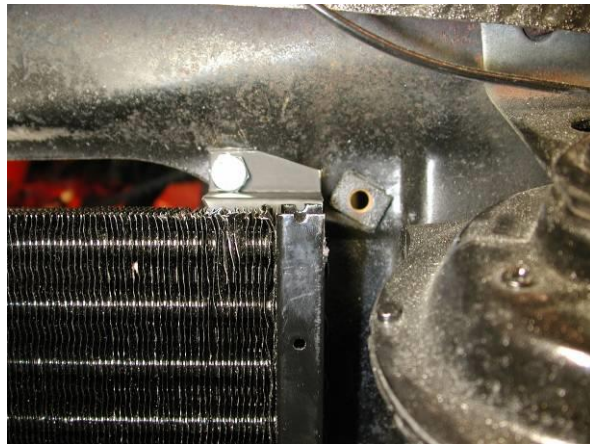
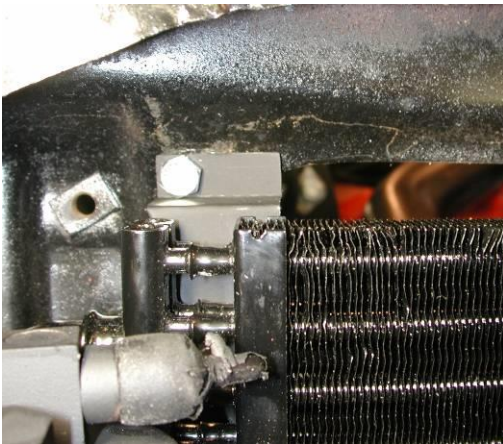
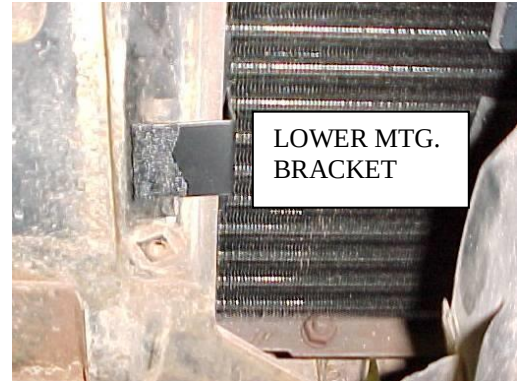


NEXT FEW PICTURES SHOWN FROM THE ENGINE SIDE OF BULKHEAD.

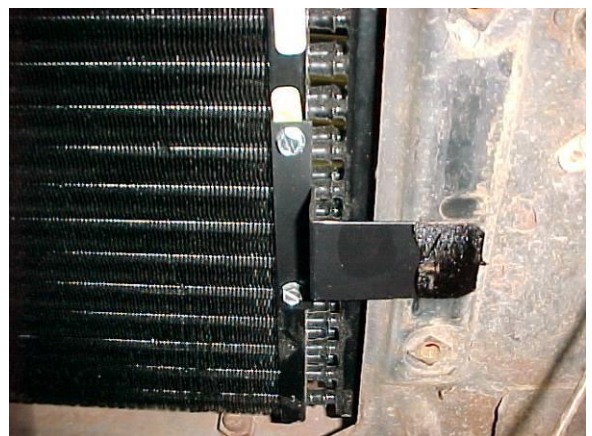
Top (2) condenser mounting brackets will need a hole drilled in top of the radiator bulkhead.

Locate condenser horizontally using lower left bracket as shown in the picture to the right.

Drill (1) $\frac{1}{4}$ " dia. hole for each of the brackets using the condenser brackets for location at top of the radiator bulkhead. Attach brackets using (2) $\frac{1}{4}$ -20 X $\frac{5}{8}$ hex head bolts and flange nuts.



Locate in the condenser kit the lower right condenser mounting and (2) #10 x $\frac{3}{8}$ " hex head screws. Attach bracket to condenser on third hole from the bottom.



Remove the battery. Retain original hardware.

Locate the discharge hose and (1) #8 o-ring.

Attach hose assembly to condenser using the #8 o-ring and a few drops of mineral oil.

Route hose through top hole and around battery and attach end with service port to the compressor using (1) #8 and a few drops of mineral oil.



Locate liquid hose and (1) #6 o-ring.

Attach 90 deg. end to outlet from filter/drier using #6 o-ring and a few drops of mineral oil.

Insert other end through lower grommet in the bulkhead.

Route hose behind battery and between fender and fender well. Attach to #6 fitting at the firewall block off.

Locate water valve and (3) worm gear clamps from the hardware sack kit.

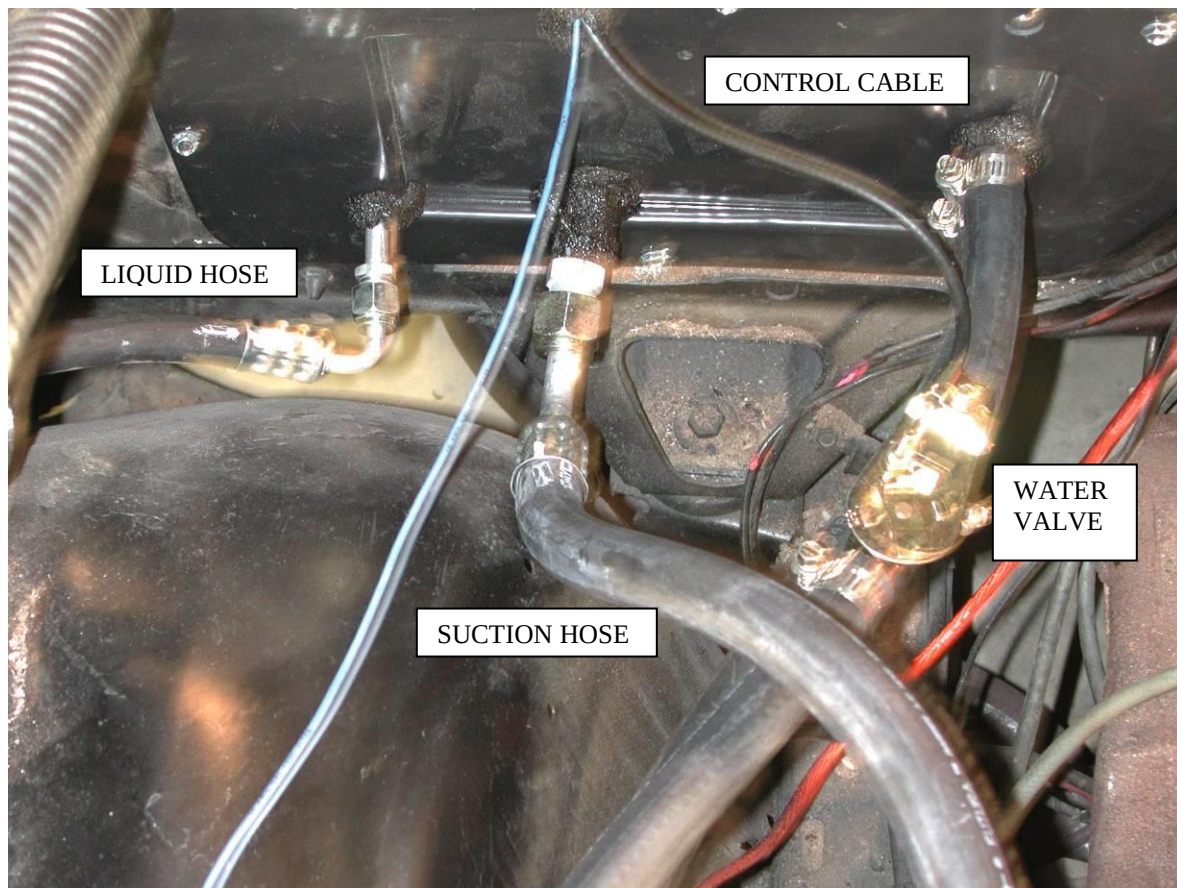


Cut 6" of heater hose from the **RETURN HOSE**. Attach this piece to top fitting at the firewall. Water valve is installed on the other end of the 6" piece.

Attach supply line from the engine to bottom hose connection.

Set control lever in the Cold position and be sure that water valve is closed.

Locate insulation tape and seal around cable at firewall.



Locate Hi/Low pressure switch and wire harness from the condenser kit. Using a few drops of mineral oil, attach switch to top of the receiver/drier.

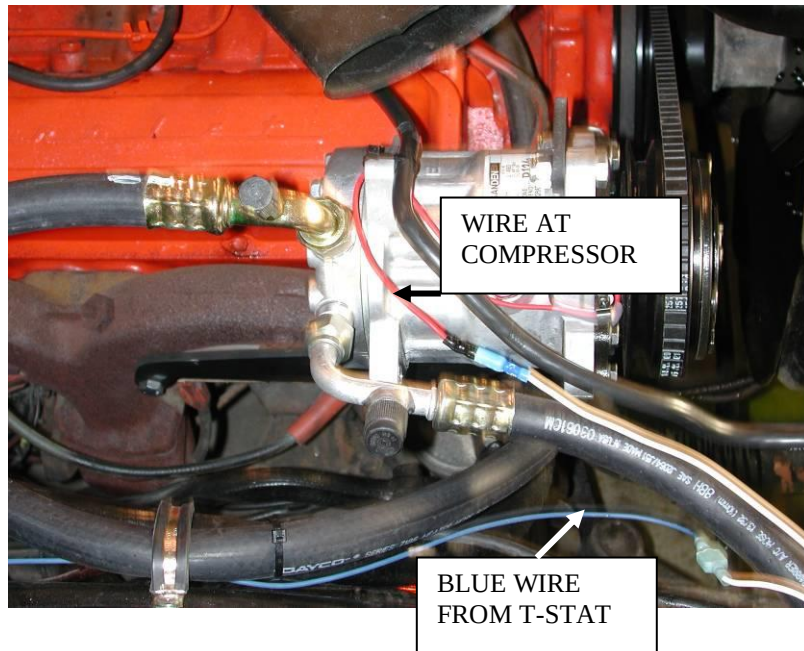
Route two white wires through top grommet along with the discharge hose and behind passenger side light assembly. Follow discharge hose to the compressor.



Route (1) of the white wires along with the #8 refrigerant hose. Attach to the compressor clutch. The other white wire attaches to Blue Clutch wire from the thermostat.

Locate the #10 refrigerant hose.

Attach end with service fitting to the compressor using (1) #10 o-ring and a few drops of mineral oil.



Attach other end to #10 fitting at the firewall. Attach using (1) #10 o-ring and a few drops of mineral oil.

Tighten securely.

Reinstall battery, radiator and fan shroud using original hardware.

***THE ENGINE COMPARTMENT OF YOUR SYSTEM IS COMPLETE.
THE UNIT IS READY FOR EVACUATION AND CHARGING.***

***THIS SHOULD BE DONE BY A QUALIFIED AND CERTIFIED AIR
CONDITIONING TECHNICIAN.***

***NOTE: COMPRESSOR IS SUPPLIED WITH THE
CORRECT OIL CHARGE. DO NOT ADD OIL TO SYSTEM.***

***134A SYSTEMS 24 oz OF REFRIGERANT
Recommend that power fuse is 25amp minimum***

***Congratulations you have completed the install of your
CLASSIC AUTO AIR "Perfect Fit Series"
climate control system.***

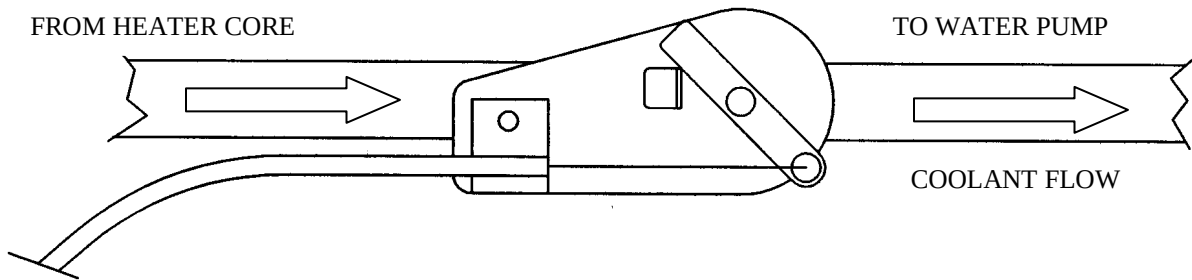
IMPORTANT

CAUTION: WATER VALVE MUST BE INSTALLED PER THE INSTRUCTIONS.

Classic Auto Air has done extensive testing on the correct method to install the water valve in order to get a repeatable and progressive temperature control.

Locate the **bottom** connection from the evaporator/heater unit off of the firewall and attach a 6" piece of 5/8" dia. heater hose with the supplied hose clamp. Next attach the inlet side of the water valve using another supplied hose clamp, (make sure the arrow on the water valve points toward the engine) Attach a heater hose from the outlet side of the water valve and route to the connection on the water pump.

NOTE: WATER VALVE = WATER PUMP

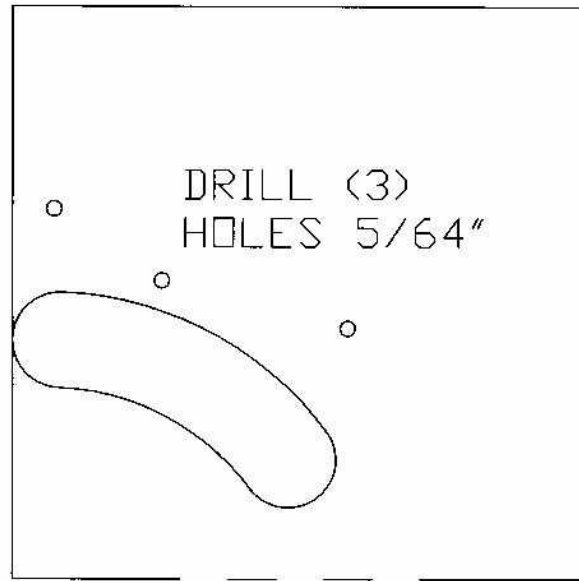


CAUTION: WATER VALVE MUST BE INSTALLED ON HEATER LINE ROUTED TO WATER PUMP.

NOTE: COMPRESSOR PURCHASED WITH KIT IS SUPPLIED WITH THE CORRECT OIL CHARGE. DO NOT ADD OIL TO SYSTEM.

***134A SYSTEMS 24 oz OF REFRIGERANT
Recommend that power fuse is 25amp minimum***

TOP EDGE OF CONTROL



TEMPLATE SWITCH MOUNTING